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FOUNDED BY WILLIAM HUNTING, F.R.C.V.S.

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SCHEDULED DISEASE.

One-third of the year is over, and we can form some estimate of the Board's progress against scheduled disease. There is still much ground for anxiety, but not a little also for congratulation.

This time last year our two most serious dangers were rabies and foot-and-mouth disease. Rabies is now almost stamped out; and its complete eradication and subsequent permanent exclusion from the country are only matters of enforcing the present regulations. Foot-and-mouth disease is still a formidable menace, as the number of outbreaks this year shows. So long as the disease continues to be prevalent abroad, we cannot certainly avoid its visitations; but it is a distinct success that we invariably bring each one quickly under control. Veterinarians, who understand the special difficulties of this question, know that hardly anything in its record is more creditable than its handling of foot-and-mouth disease; but we cannot expect the public to be equally appreciative; although a recent press notice on the method of control of rabies should help in that direction.

Parasitic mange shows a marked decline. So far this year, the out-breaks have totalled well over 400 less than the corresponding figures of last year, and are also below those of 1918. War conditions accounted for the serious increase of mange in recent years. Now that they are removed, we may confidently expect to get it in hand again before long. Other diseases show less favourable figures. Glanders, anthrax, sheep-scab, and swine fever have all increased more or less. The glanders increase is not great (the figures are still below those of 1918), and it need cause no concern. Neither does the sheep-scab increase appear alarming. The other two diseases show more serious rises; for swine fever is not very far from doubling last year's corresponding figures, and anthrax has much more than doubled. Probably these two diseases will remain with us long after some others scheduled have disappeared from the Kingdom. Both decreased greatly during the war; and this suggests that some special conditions inhibited their spread. In the case of swine fever, indeed, it is known that the Board attributed that decrease to the enforced suspension of the transit of pigs. Possibly the experience may suggest some new ideas concerning both these diseases; but whether it can suggest any preventive measures likely to be found practicable is another question.

THE SUBSCRIPTION.

As noted in our issue of April 24, an increase in the subscription has become inevitable, and commencing with this issue the new rate will be 20/- per annum. We make the change with reluctance. We worried through the later years of war-time—somehow; and we have delayed the alteration. With the present outlook a further increase may yet be necessary, and a return to our pre-war status would make it a certainty. The handicap of the limited circulation is always with us.

ATYPICAL PURPURA (?)

By ARTHUR NEW, M.R.C.V.S., Ashton-under-Lyne.

On February 7th last I was called to attend a valuable trotting gelding, at the Snipe Grounds, Ardenshaw, showing the following symptoms. Pulse 60, temperature 103, swellings on the inner side of both thighs extending downwards, a large one between the fore legs and around the off elbow, several, the size of an egg, along both sides of the ribs. The animal had been suffering from strangles, the abscess of which had been lanced by another trainer and was slightly discharging pus. There was no discharge from the nostrils, no petechial agents on the m.m., and no weeping from the swellings.

Considering the case one of purpura, I gave iron and tonics, with instructions for milk, eggs, and any nourishment they could get the animal to take.

February 9th. The swellings down the legs had increased very much, and I called in a V.S. to consult and he was of opinion that the abscess had been opened with a dirty knife, and that I had in consequence an irregular case of purpura to deal with.

February 14th. The swellings had begun to move about and the skin became very irritable making the animal bite himself, which he did severely on the off fore leg. I had a light muzzle put on at night when the attendants were away, but we had to do away with this early, as wherever the muzzle or head collar touched, a swelling rapidly developed.

On the morning of February 21st he seemed to be improving, and the swellings being rather less he was able to move more freely. About 4 p.m. on that day the trainer rang up to say that the horse had colic very badly and was rolling about. I found this to be the case; a great part of the swellings had disappeared and the animal showed great abdominal pain. I gave him a 70 M. dose of morphia, and did not expect to see him again alive, as I thought the swelling had most probably ploughed up the intestinal m.m.

Upon attendance next morning I found the animal on his feet, and feeding fairly well, a large swelling had developed on the seat of the morphia injection and most of the swelling had returned but chiefly under the abdomen, very little returned to the legs.

On February 24th and 25th he had several attacks of colicky pain, and during the night of the 25th passed several times a large quantity of urine, the attendants stated was almost like pure blood. They did not catch any for me to examine. This seemed to be the turning point of the case, as the horse made a continuous recovery from this date, and was discharged cured on March 23rd.

RUPTURE OF RECTUM IN A COW.

On April 11th I was asked to examine a cow at Mr. Ogden's farm, Hartshead. I noticed that she had trusses fitted on, and asked the owner when she had calved, and he said about 7 or 8 weeks but, the bull that was kept in the same shippon had got loose on the previous Tuesday in the night, and the cow had been straining very heavily since.

I examined the vagina but could not detect any abnormality, but the cow strained very heavily during my examination and forced out a portion of the rectum as large as a man's fist, this appeared very much injected from being forced against a rough set of trusses.

The cow was giving 15 quarts of milk per day, and I advised trying her for a short time to see if we could stop the straining, I syringed the vagina, and asked the owner to go down to the surgery with me and I would find him some medicine and a better fitting truss. As I was getting into my motor I missed my gloves, and returned to see if I had left them in the shippon, Mr. Ogden returning with me; the cow was then straining with great force, and as we stood watching her for a few minutes the rectum suddenly burst and the small intestines came rolling out like sausages. As nothing could be done, I got a butcher as early as possible and had her dressed. Upon examination of the rectum and vagina no direct puncture or tear could be found that might have been caused by a bull; but the point where the rectum had burst appeared almost cut through right round, where it had been forced against the truss, which had a round hole cut in a stout piece of leather.

ON THE OCCURRENCE OF TWO *Hypopi* AND A ? *Trombidiid* IN SKIN SCRAPINGS OF HORSES

A. W. NOEL-PILLERS, F.R.C.V.S.

In a previous note in this journal [1] I reported the finding of *Aleurobius farinæ* in scrapings from the skins of horses suspected of mange. It was there stated that hypopi had been encountered several times. The subject was again referred to some months later in a record of *Tyroglyphus longior* [2] from horses skins. Hypopi or hypopial nymphæ are characteristic of the famiiy *Tyroglyphidæ*. They are developed under certain conditions in addition to the ordinary nymphæ and are assumed to be for purposes of distribution. A number are imperfectly known and at one time some were regarded as a species of a genus *Hypopus*. Some are very rudimentary. The two illustrated by Figure I and II represent types that are frequently encountered. They show no mouth parts and are furnished with the characteristic sucker plates between the hind pairs of legs. Generally such suckers are used to attach the hypopus to the horny integument of some insect. Figure I closely resembles *Tyroglyphus* but it is not possible to specifically determine it or Figure II for they had passed through boiling caustic potash solution before being stained with red ink, It will be seen that the specimen in Figure II is extremely small.

Figure III shows an adult acarus, also badly damaged by boiling, which belongs to quite a different family and which I have only seen on three occasions. Owing to its condition it is not possible to place it in its genus or to say anything more definite than that it appears to belong to the family *Trombidiidæ*.

With regard to these findings it is interesting to note the following quotation taken from Fleming (1875)[3]

"In making these examinations it is necessary to remember that in the epidermic detritus of all horses—no matter whether the skin is healthy or diseased—there are found the bodies of acari derived from the dust of forage, such as *Glyciphagi*, *Cheylitæ*,

Fig. 1.
Hypopus, skin of Horse × 100.

Fig. 2.
Hypopus, skin of Horse × 200.

Fig. 3.
? Trombidiid, skin of horse × 100.

Tyroglyphæ, etc., which might be mistaken for the sarcopt, though they are perfectly harmless. And the larvæ of the *Gamasidæ* which may live in great numbers as parasites on horses and other of the domesticated animals might still more easily be mistaken for it as they are alive. They however cause no injury but merely live on the surface of the skin among the hair . . . "

The present note offers a suitable opportunity to say that through the kindness of Prof. R.Newstead, F.R.S. I have seen Carpano's work [4] referred to in the account of *Aleurobius farinae* and his diagrams show that he was clearly not dealing with a *Tyroglyphus* but with *Pediculoides ventricosus* Newport.

REFERENCES.

1. On the occurrence of *Aleurobius farinæ* (de Geer) in skin scrapings of horses, *Vet. Record* Vol. XXXII, No. 1619, p. 22 July 19th, 1919, London.
2. On the occurrence of *Tyroglyphus longior* Gervais in skin scrapings of horses, *Vet. Record* Vol. XXXII, No. 1657, p. 475, April 10th, 1920, London.
3. Fleming, G., A manual of Veterinary Sanitary Science and Police Vol. II p. 407, 1875, London.
4. Carpano, M., On a mite of the genus *Tyroglyphus* an accidental parasite of the horse, *Clinica Veterinaria*, XLI, No. 7, 1918, Milan.

AZOTURIA IN ARMY HORSES.

Sir,—Mr. H, Low, in *The Veterinary Record* of last week asks why the ex-army horse should be subject to this disease ; also if any other members have had cases of azoturia in ex-army horses. It is, of course, not a disease peculiar to the ex-army horse. The explanation is that the Army purchased large numbers of horses from the United States, and it is generally the American horse of the Percheron type that is so subject to this disease. The 'bus companies and firms who purchased this type of horse previous to the war had the same experience, but stringent precautions were taken. Mr. Low is to be congratulated in getting his cases well in 24 hours ; but I am not in agreement with his method of treatment.

Probably the most important thing is that the animal should immediately be stopped when found lame on the road, and on no account should the driver endeavour to force the animal along ; it should either be fetched home by ambulance or taken into stables near by. In nearly all cases where the attack is a very severe one and ends fatally, the history is that the animal is forced to travel some distance after the onset of the attack. My own experience is that it is best to place the animal in a very roomy box with plenty of bedding, and administer chloral ℥i, ℥ii if animal is in severe pain. I do not agree with slinging or forcing the animal to keep standing. The greater the muscular exertion the worse the attack ; many animals will lie down perfectly quietly, and these generally recover. It may be advisable to try and sling them if unable to rise after 24 hours, but Mr. Low's dictum, "on no account allow the horse to get down"—well, I should rather like to see anybody keep some of them up. I cannot speak on the wonderful curative effects of sod. bicarb., but will try it on next bad case.

The most serious sequel—crural paralysis, generally of one quarter, commonly involves several months' rest—even then not a useful recovery.

H. D. JONES, M.R.C.V.S.

Peckham, S.E.

NATIONAL VETERINARY MEDICAL ASSOCIATION

THE CENTRAL DIVISION (LONDON).

(Concluded from page 517.)

Mr. W. R. DAVIS said the Author had referred to cases of cellulitis having its origin in the alveoli, and he felt quite convinced the Author was right when he said that that was the starting point of the condition, although he could not say that he had thought of it before. The last case he saw was in a three year old horse in which the disease had reached up the face, had affected the conjunctivæ. This membrane in each eye was protruding, forming two huge borders, of almost a crimson colour, and when the animal turned round it was hideous to look at. It was taken ill at night and the next day it died. In that case he never suspected that the teeth were the cause of the trouble, but he had not the slightest doubt since examining the specimens that the diseased condition of some of the teeth was the starting point of the malady. The author had said that this cellulitis was never observed except in young animals, but personally he had seen the same condition affect the head of old horses. It was also common from wounds, and as Mr. Gray had said, he believed it was more common in some parts of the country than in others. He had seen two or three cases since he had been living in London, but he saw a great number of cases at the place at which he used to live previous to that. Once he remembered particularly was the case of a horse which was turned out in a field that had been top dressed with manure brought from the town, and among that manure was a broken soda water bottle The horse rolled on the ground and the soda water bottle made a wound on the animal's rump ; the owner dressed it with something, and an enormous swelling ensued, with a horrible stench and gangrene. That horse also died. He was under the impression that the author said that a case of malignant oedema occurred among the specimens of the heads of the ox that were shown. He did not think the ox was subject to that disease except in cases of parturition, where it affected the external genitals and the womb. The vulva became enormously swollen, oedematous and purple in colour. The oedema extended to the connective tissue of the pelvis and to the walls of the uterus. Such cases were invariably fatal in a few days. He desired to thank Mr. Harvey for the great pains he had taken to collect and prepare the specimens, for the highly interesting and instructive histories relative to them, and for the trouble in presenting them here, and thus affording the fellows an opportunity to examine the morbid changes.

Capt. W. L. LITTLE said he noticed the author confined the paper mostly to complications of periodontal disease and left out the origin and the progress of the disease. As a matter of fact he thought most of the cases which had been shown were complications of periodontal disease, accidental inoculation with malignant oedema or tetanus, or other organisms. Probably some of those cases were due to putrefactive invasion. With regard to the origin of the disease in young animals, he thought some of it was not true periodontal disease or pyorrhoea but that it was due to teething trouble, where swelling at the base of the teeth obtained, particularly in the upper jaw, not so much in the lower jaw. In older animals he thought it was due to injury to the buccal mucous membrane and invasion by the food becoming putrid. The author did not think that the mere accumulation of food would cause disease Personally he thought that if there were spaces between the teeth, especially in the lower jaw, the food accumulated there, became pu-

trid, and by pressure injury to the mucous membrane was set up, and infection. In that way periodontal disease was produced. He had hoped to hear something in the course of the paper with regard to pyorrhoea in cats and dogs. In his experience dogs were very subject to pyorrhoea, and he thought it was the chief cause of dogs losing their teeth. It was also common in cats, especially in long-haired cats, the hair getting round their teeth so that infection of the buccal membrane took place; the teeth became loose and eventually fell out. The author also said that young animals might die of the disease. Personally he did not think that was so; he thought young animals died from the complications. Old animals were nor affected to such an extent. A few years ago he was very much interested in the subject from the point of view of sheep. He obtained as many sheep's heads as he could from the butchers, and he came across a disease very similar to what the author had shown in the sheep's jaw. He remembered one particular case in which the jaw was very similar to that shown of the ox. He thought then that the cases were due to infection by the ray fungus. Owing to their short length of life there was no doubt that sheep did not have periodontal disease to such an extent as other animals, for instance the horse.

Prof. G. H. Wooldridge desired to express his grateful thanks to Mr. Harvey for the valuable material he had brought before the Society. It had opened up quite a new line of work to most of the members, and it emphasised the necessity for examining mouths and teeth much more frequently and critically than had been the case in the past. The author had referred to the fact that veterinary surgeons were handicapped in the respect that their vision of the mouth of an animal was usually a straight vision, and it was impossible to get a lateral view such as was possible in the human mouth. The lateral view was usually obtained by means of mirrors, and that emphasised the necessity of veterinary surgeons using a torch and a mirror much more frequently than they did in attempting to make diagnoses of the conditions of the mouth in horses and dogs. The work the author had done both in preparing the paper and the specimens was enormous. The suggestion was frequently made that country practitions were particularly backward in making observations. He thought Mr. Harvey, at any rate, was a very gallant and noteworthy exception to that suggestion, and it was to be hoped that his lead would stimulate other country veterinary surgeons, who had the facilities and the power of observation, to follow suit. He thought Capt. Little could not possibly have had an opportunity of reading the paper, otherwise he would not have made a considerable number of statements he had done. Most of the points he had raised were very clearly dealt with in the paper. He (Prof. Wooldridge) had frequently considered, without having had the opportunity of verifying his assumption, that many of the conditions that had not ordinarily been attributed to teeth, or teeth disease, were directly associated with them.

The author half apologised for introducing the question of lameness as associated with teeth, but he thought there was no necessity to do so. It was not at all a far cry either in the human subject or in the lower animals. He was quite certain that a very large proportion of cases of periodontal lameness in patients was due to teeth affections. That could be proved very clearly and definitely in the smaller animals much more readily than in the larger animals. In the human subject rheumatoid pains were of very frequent association with alveolar periostitis and also suppurative alveolitis, and it was only when the offending teeth had been removed and the gums and alveoli had been restored to a healthy condition that the pains were cured. The pains and lamenesses were metastatic, and he felt certain that many cases of lameness of a metastatic character were toxic in origin, the seat of infection being the alveoli. It had been stated by one of the speakers that the author had not suggested how the depth of the cavities became infected. When he read a portion of the paper he began to think that too, but as he went on he found that what appeared to be an omission was not so but that it had been accounted for later. Towards the bottom of page 8 the author drew attention to the fact that young colts were constantly affected, and he wondered if there was any association between that condition and navel-ill. Navel-ill was in most cases a septicaemia, and when recovery from a septicaemia took place certain local foci might remain infected but latent, and it was conceivable that the alveoli might be seats of it. Further on the author made the statement: "Whether certain cases of early alveolar disease in colts are merely late expressions of navel-ill or some other general infection, it is at present impossible to say." He had put a note across that to the effect that it was a very interesting speculation, but he thought the author might go still further. Reference had been made on other occasions to various forms of ostitis involving the ends of bones and ultimately resulting in exostosis and arthritis commencing from the centre of the bone. How, and when, and where was the infective point? It was interesting to consider whether they might not also be latent foci which had been left after navel infection, and that it might have a similar origin to those cases which the author had brought before them. An interesting point in connection with jaws and the occurrence of periodontal disease had not been emphasised, namely, that apparently the first and second molars were by far the most frequently affected in young animals, while in adults the fourth molar was most frequently affected. It would be interesting if the author could suggest a reason for that. Several speakers had referred to the question of sheep being affected. Although he had not observed the disease affecting the molar teeth of sheep be had observed it affecting the incisors. Whether it was of similar origin he could not say, but there had certainly been alveolitis, and he thought in many instances that was responsible for the early loss of the incisors of sheep. That rarely occurred, in his experience, with sheep until after they were three years old. It was suggested by Capt. Little that sheep did not get it so often as horses because of their comparatively short life, but among the specimens shown were those of colts eight months old. Most sheep lived beyond that age, so that he was afraid Capt. Little's point in that respect missed fire. The occurrence of alveolar nodes or splints inside the jaw had been suggested by the author as being probably of periodontal origin. That interested him because he (the speaker) was the subject of several of those splints on the inner side of his lower jaw. So far as he was aware, after various visits to the dentist and from his own survey of the condition of his teeth, he had never experienced any alveolitis. Therefore although some of the cases might result from periodontal infection it was obvious that, at any rate in the human subject, they were not all due to that origin. The difference in the lesions produced by the upper and lower teeth was referred to on page 12. The author thought that probably the infection of the tongue from the lower teeth was mainly due to the fact that the mucous membrane there was thinner contrasted with the upper surface of the tongue. He did not think that was the chief reason. He thought the chief reason was the difference in the wear of the molar teeth. Since the arch of the upper jaw was wider than that of the lower, sharp irregularities of the inner edge of the lower teeth

were frequently present and they were much more likely to infect the tongue, while irregularities of the upper teeth affected the cheek rather than the tongue. Although the mucous membrane was denser on the upper surface, he thought if they had the same sharp points on the inner edge of the upper teeth they would wound the tongue and it would get infected with malignant oedema equally well. The backward spread was due to the lymphatic channel rather than to the veins. He did not think that was at all a difficult point to understand, because in nearly every infection the spread of the oedema was first in the direct channel of the lymph flow, and it was not until the lymphatic glands themselves became so inflamed that the passage of lymph was occluded that the lower portion of the tissues became oedematous. The author suggested that in some of the cases of enlargement of the jaw that were due to infection early extraction of the tooth from the alveolus first attacked, and trephining and drilling into the bone from without would seem indicated. It would, but the author did not go so far as to say that he recommended it. It would be interesting to know if he did. It seemed to be rather drastic, while the possibilities of secondary infection would be very considerably enhanced, and only in special instances would it be called for. Nevertheless, in cases where the bone had become rarefied and suppurating points had been established one ought not to hesitate to trephine into the bone, whether the upper or the lower jaw. One much more rarely trephined the lower jaw than the upper, because the upper jaw was so much more affected. The reason probably was that the density of the bone of the lower jaw was far greater than that of the upper jaw, but he thought a veterinary surgeon should not hesitate to trephine the lower jaw also. He had done so in a number of cases, with quite gratifying results. Harking back, he would like an opinion from the author as to the possible association of cases of chronic stifle joint disease (gonitis) that were observed in old horses with a primary infection in the region of the teeth, or possibly from the navel in young animals.

The PRESIDENT, after sincerely thanking the Author for his excellent paper, which was interesting from many points of view, said the Author dealt on page 8, with the focus of infection. When organisms were in the blood stream, although in the vast majority of cases they were readily and quickly phagocyted and produced no ill effects, if any tissue was damaged they were likely to become localised and produce trouble. It seemed to him that that might account for many obscure foci which occurred, particularly in the case of bones and joints. It was very seldom that one came across a record of cases of malignant oedema, but in his experience that was not because such cases did not occur, because from enquiries he had made in different parts of the country he found that they undoubtedly did occur with a greater degree of frequency than was often supposed. During the last five or six years it had been his doubtful privilege to come across a very large number of cases of what had been called gas gangrene in horses. It had been found during the last year or two that those cases, which had very naturally been called malignant oedema, might be produced by several different organisms; indeed the Author's observations confirmed the fact that those different organisms were also capable of infecting the horse. He agreed with the the Author's statement on page 11, that "Free incisions and drainage of the infected tissues along with removal of any loose tooth can alone offer any chance of successful treatment." It was his duty at one time to try and prevent the spread of a vast number of cases of malignant oedema. He tried a very large number of chemical agents, and eventually found that a solution of permanganate of potash injected jnst beyond the edge of the infected area was extremely useful. Another point he desired to consider was the spread of the infection. In the case of tetanus, the organisms remained localized and produced a toxin which was absorbed by the body and that produced the effect; whereas the so-called malignant oedema bacillus produced a very weak toxin. It spread through the tissues; it thrived on dying and dead tissues, and so killed the animal. That bore out the Author's observation that the spread of the disease was always towards loose tissue, and that, he took it, was why they found that it was shut up for a considerable time, and then suddenly let loose and produced a rapid death. The Author observed that it spread towards the throat. It did. If the infection was in the shoulder the oedema went to the throat, which was not what one would expect, but it was owing to the fact that the organism was following the line of least resistance. Another point of very great interest was that the disease had been noticed by the Author in animals up to three years of age. Apart from the fact that they were more liable to infection, he thought the explanation was that many older animals had had a light infection at some previous time and showed a considerable degree of immunity. Another point of interest was the Author's reasonable assumption that an animal which was working and had a diseased tooth might develope synovitis. Very few persons had any conception of the effect which bacterial proteid alone would produce on nerve trunks and endings and also upon joints. A joint might only have strain put upon it to produce synovitis. Another point of interest occurred on page 22, where the Author pointed out that there was the possibility of a slow and continuous entry of toxin into the blood stream by way of the stomach, and also more directly by the alveolar path. That, he believed, was quite correct, but he did not wish it to be thought that he agreed, for example, that the toxin of the so-called malignant oedema bacillus would behave in that manner. He thought that where there were pyogenic organisms in a state of that sort there was a continuous excretion of toxin which produced very weird effects, particularly an effect which could only be called general malaise in the animal. He thought opportunity should be taken of the Author's experience to further their knowledge in determining whether those were cases of malignant oedema or not. It was now possible to obtain a specific anti-toxin which would absolutely obliterate the toxic effects on the animal and save life at the eleventh hour, and if the Author cared to carry out some experiments with such specific anti-toxins he would be very glad to place some at his disposal.

REPLY.

Mr. F. T. HARVEY, said he had not been able to find evidence of the disease in sheep which he had seen in colts but an occasional case of disease involving the jaw and throat in sheep would be found. One or two speakers had referred to alveolar disease being commoner in some parts of the country than others. Very frequently the disease was overlooked. He now recognised the disease because he looked for it, whereas years ago he would not have done so. If only a casual glance was made at the animal and a proper investigation was not made, naturally the disease was overlooked. He would not call malignant oedema alveolar disease. The cases of the disease he had shown were merely secondary infections. The malignant bacillus had been implanted on the tissues. Alveolar disease in that case would be merely like a wound into which germs would have a favourable opportunity of getting and growing. Mr. Gray had spoken of the disease spreading through a sinus. As he had said in his paper, the inner wall of the alveolus rapidly became destroyed, and the disease spread along the lymphatics of the mucous membrane of the nose, so that the mode of spread was that of an ordinary cellulitis. The statement had been made that he had said the disease malignant oedema did not occur in young animals

over three years old. That was not so. It might occur in animals of any age, but only occasionally. Eventually the tendency to disease passed away. Whether the animal acquired immunity to the organism he did not know, but with the arrival of the third year the 1st and 2nd temporary teeth disappeared; the third molar was the only one (temporary) left. The other teeth were coming up and the parts began to reach adult stage, so that they were better able to resist the inroads of disease, and the tissues made better provision for protecting the animals from the inroads of germs from outside. The points alluded to by Captain Little were answered in the paper itself. Professor Wooldridge had alluded to the use of a mirror for the inspection of the mouth. The paper had been written with the hope of starting a discussion on the subject on whether it was possible to improve methods of diagnosis and the inspection of teeth, such as the use of mirrors. Practitioners who lived near large cities in which it was possible to acquire diagnostic instruments, such as mirrors, might be able to develope one for the purpose which should prove extremely useful. Professor Wooldridge also referred to focal infection, which was acquiring a very important vogue at the present day in pathology. The longer they went on the greater the number of diseases there probably would be that would be attributed to focal infection. So far as inflammation of the jaw was concerned, the teeth were only one focus of infection. There was another very important focus in the horse, which in his view was quite as important as aveolar trouble—the invasion of of the abdominal organs by round worms. On post-mortem examination of a horse, some trouble round the mesenteric artery was frequently found, and an animal that had been badly infected might carry one or more foci of infection in his abdominal organs, and that might also be distributing toxin or organisms into the blood stream, and thus bring about joint troubles. It was very important for veterinary surgeons to thoroughly realise the importance of focal infections in the etiology of disease. Then Prof. Wooldridge referred to the two first teeth, which practically came up together, so that there was a good deal of change going on, particularly as they came up at an age before the animal acquired any pronounced immunity. Prof. Wooldridge had suggested that infection of the tongue was due to wounds or to the condition of the teeth. He did not think that was so, because the tongue was not wounded, but if septic material or diphtheric stuff was being discharged the tongue was bathed in it, and it soaked into the tissues. He did think the dense membranes offered a considerable resistance to the infection; while the very thin layer was popping up against it, and it quickly jumped across—mortification by contact. The question of why the fourth tooth was so often involved in old horses was dealt with on page 20 of the paper. Was it not probable that an extension of infection from the pre-molar alveolus to that of the permanent one was likely? The frequency of disease in the alveolus of the fourth molar in old horses was thus explained by direct infection, instead of regarding it as due to pressure. He did not think the position of the tooth in the centre of the row, as had been suggested, was the explanation; it was purely a case of bacterial infection of the teeth at an early stage. With regard to trephining, in the case of a bullock in low condition, if on examination of the mouth disease of bone was found to be present, he thought it was desirable to get rid of the pus and put in some iodine as quickly as possible. In all surgical conditions, once a bone cavity had been formed it was difficult to obliterate it, and it remained a weak centre of the animal's jaw, which rapidly became affected secondarily. He was glad that Prof. Wooldridge and the President agreed with his remarks on stifle joint diseases. He looked upon navel-ill as the cause of a good deal of trouble to which horse flesh was heir; and a lot of the other troubles would be dealt with when the bacteriologist could solve the problem of navel-ill, which was one of the most pressing problems in horse practice. There were two great causes of disease in the horse, namely navel-ill in very young animals, and parasitic invasion of round worms in later life. He had alluded to the difficulties of serum treatment because of the avalanche nature of the disease. The animal died before it was possible to get any serum. Everything depended on arresting the disease at an early stage, and if any practitioners living near London could get serum promptly it was a line of treatment that should be adopted. Veterinary surgeons could be greatly helped by bacteriologists, who were opening up new lines of treatment for them every day, and if the clinician and bacteriologist would work more in harmony in the future he would look forward to a great increase in the ability of the general practitioner to handle disease. He thanked the Fellows very sincerely for the kind way in which they had received his paper.

On the motion of Mr. McIntosh, seconded by Mr. H. A. MacCormack, a hearty vote of thanks was accorded to Mr. Harvey for his excellent paper, which Mr. Harvey briefly acknowledged; and a vote of thanks having been accorded to the President for his conduct in the chair, the meeting terminated.

HUGH A. MACCORMACK, Hon. Sec.

DERBYSHIRE VETERINARY ASSOCIATION.

The quarterly meeting was held at the St. James' Hotel, Derby, Mr. G. Howe presiding. Other members present were Messrs. A. Levie, White, King, Abell, Marrison, Duckworth, Fairer, Rawlins, DeVille, McIntyre, Hawksworth and others, and Mr. Prince (hon. sec.), Mr. Boyle (Belper) was elected a member.

Mr. LEVIE reported that he had been interviewed by the Secretary of the Derbyshire Agricultural Show Committee with regard to the attendance of a veterinary surgeon, and said that no guarantee could be given by the Show Committee that patent veterinary medicines would be excluded from the show. His view was that no member should attend the show in an official capacity unless that guarantee were given and a fee paid.

Mr. DUCKWORTH moved that The Show Committee be informed that if medicine vendors be allowed to be present no member of that Society would act for the show.

Mr. ABELL seconded and remarked that he regretted very much that a member of the Council of the R.C.V.S. should be one of their greatest opponents in their effort to raise the status of their profession. That conduct, if not disgraceful, was at least discourteous between one gentleman and another.

The PRESIDENT referred to the fees payable by local authorities to veterinary surgeons, and said the Derbyshire County Council while saying they had the Association's scale under consideration had reduced members accounts. It was six months since the new scale was decided on by the Association.

Mr. DUCKWORTH moved that local authorities be informed that the members of the Association intended to adhere to the scale previously submitted, and if the local authorities insisted that the old scale of ten years ago be worked on members would refuse to act further for the local authorities.

Mr. DEVILLE thought they would have to accept the reduced charges on the last account and refuse to act further if the new scale were not adopted.

Mr. LEVIE thought that the last accounts should be sent back with a protest. If they were going to work their Association in a meek and mild way they ought to be prepared to shut down at once.

Mr. KING seconded the motion which was carried.

Capt. RAWLINS called attention to the fact that Mr. James Blakeway, senr., Great Malvern, was advertising in the organ of the unregistered practitioners, and he moved that the unprofessional conduct be brought to the notice of the R.C.V.S.

Mr. MARRISON seconded, and the motion was carried.

Mr. LEVIE was empowered to interview Ald. Green, M.P., and place before him the Association's view with regard to the Veterinary Surgeons Act (Amendment) Bill, and it was decided to write all local members of Parliament in regard to the matter.

ANESTHESIA.

By Capt. R. RAWLINS, M.R.C.V.S., Chesterfield.

Anesthesia may be general or local. In general anesthesia the animal is thrown into a profound sleep; and in practice Chloroform and its mixtures hold predominance.

Precautions. Before administering an anesthetic, if circumstances allow the animal should be prepared as follows:- Give a dose of Physic. Withhold food for at least 12 hours. The state of the heart should be examined and if any disease is recognised or even suspected this should be pointed out to one's client, this also applies to respiratory diseases.

The anesthetic can be administered either with the animal standing or cast. If cast, always apply back restrainers to prevent fracture, especially in thoroughbreds and well conditioned animals: muscular contraction is very severe, and mishaps can happen.

The careful operator generally smears the animal's nostrils and muzzle with vaseline to prevent irritation from the chloroform. Tie the tongue to the side of the headstall to prevent it slipping back and choking the animal.

In text books three periods of Anesthesia are mentioned:- 1.—Period of excitement. 2.—Anesthetic or surgical period. 3.—Period of collapse. The first period is due to the action of the anesthetic upon the nerve endings, particularly of the Larynx and upper Respiratory Tract, this quickly extends to the nerve centres themselves, characterised by excitement and hyperaesthesia of the sense organs. The animal struggles, the heart's action and respiration is quickened, and note the *pupils dilate.*

This accelerate action of the heart and respiration calms down, struggles diminish, the pupils contracts, sleep commences and gradually the animal loses reflex of the limbs and of the Cornea. This is the period when one can commence operating.

When incised by the knife, it will be noticed that although limb and cornea reflex has ceased, very often reflex and some little struggling may take place, particularly if the seat of operation is in an inflammatory state.

During the operation the pulse should remain regular and the pupils contracted and immobile. If breathing becomes shallow, the pulse irregular and the pupils dilated the anesthetic is being pushed *too far;* air should then be allowed, a hypodermic injection of Strychnine, and intermittent pressure every 4 or 5 seconds on the ribs; traction of the tongue also gives good results if done every 2 or 3 seconds.

Quantity. The quantity of Chloroform necessary varies somewhat; with the horse I generally start with a dose of 1½ to 2 oz., if pure chloroform is being given, spread on a pad of tow enclosed in surgical gauze. This I like much better than cotton wool, as it gives up the anesthetic better. The pad can be dipped in hot water previous to spreading on the chloroform, it must however, be wrung out as dry as possible.

Sleep is maintained by giving small additional doses as required. Where the animal is weak, Sulphuric ether can be mixed with the chloroform, as there is not so much depression afterwards—In 1 to 3 parts of chloroform, A.C.E. mixture, in horses and cattle I have not found possessing any advantages over chloroform pure or chloroform and ether.

Cattle take chloroform practically as well as horses, a larger dose is necessary, however, I never start with less than 2 oz. of chloroform for mature cows or bulls; in sheep also its use is easy, they generally take about 4 drms. unless it is an old tup which may require 6 drms.

The Muzzle. This should be as simple as possible, Cox's Muzzle, or an ordinary army nose bag are quite satisfactory. The home-made one I show you is really all that is necessary. The muzzle is put on to enclose the nostrils only, a strap passes over the poll to retain it in position and a running noose above the nostrils prevents escape of the vapour. The pad saturated with the anæsthetic is placed in the muzzle through a hole in the bottom, this is also closed by a running noose. The animal's head and muzzle (not above the eyes) is now placed in a rug and results awaited.

I think it is always wise to time results with the watch, it will generally be found that the anæsthetic state is reached in from 10 to 13 minutes.

One cannot be too careful about the make of chloroform used; bad chloroform not only irritates the respiratory tract, but its results as an anæsthetic are not uniform. 4 oz. ampoules supplied by Duncan Flockhart I have found to be best.

In human practice a morphia hypodermic injection is used before the anæsthetic. I have not found it lessen the state of excitement in either horses or cattle, it does do so, however, in the dog and cat.

If it is decided to give an anæsthetic to an animal in the standing position it should be secured by a strong headstall, and a fairly long rope is attached to this and held by two or three assistants, the anæsthetic is placed in the muzzle and the animal is made to go round in a circle until he gradually goes down and is quiet. I have never attempted to give an anæsthetic whilst in the standing position when the animal was in a box or enclosed place. I always get the animal on soft grass. I am sure none of us will find putting our patients under an anæsthetic entails either much trouble or danger, and it is compensated for in the comfort and safety under which we operate, not forgetting the human side of the question.

Never be in too great a hurry to get your animal on its feet again. It is generally wise, however, to pack up the head and shoulder to throw it on its sternum as much as possible, to prevent lung congestion. Food should not be given for some few hours, I have seen two bad cases of choking resulting from the animal being allowed to eat when it had first got on its feet.

LOCAL ANAESTHESIA.

In local anæsthesia the region of operation alone is rendered insensible to pain.

The usual drbgs used for this are cocaine, novococaine, and stovaine; adrenalin may be added as this controls bleeding from the capillaries and small vessels.

Cocaine is, however, the most useful local anæsthetic in from 2 to 10 p.c. solutions. Remember cocaine solutions lose their anæsthetic properties if they become acid; the solution can always be again neutralised, however.

Five grns. of cocaine has in the hands of some surgeon produced very toxic effects when given hypodermically to the horse.

Local anæsthesia is particularly useful in neurectomies, for the removal of cysts and small growths, in removal of the eye, etc., but for the removal of the eye the solution should be injected into the anterior chamber or into the eye substance, otherwise the results will not be successful.

It has been advised to be injected in the substance of the testicle for its painless removal. Docking also according to the terms of the Veterinary Anæsthetic Bill be facilitated by its use.

One can get very satisfactory local anæsthesia by injecting a weak sterilised solution of salt, injected until artificial œdema is produced. It wants injecting under great pressure—there is little or no bleeding in this method and no toxic effects afterwards.

In cases of difficult shoeing a state of partial anæsthesia can be secured by injecting 2 drms. of a 10 p.c. solution of chloral into the jugular, the solution of course is made with sterilised O.H.[2] care must be taken not to allow air to get into the vein and the trochar must be thoroughly sterile. The animal may tremble more or less violently after the injection, but it passes off in a short time. Its drawback is that phlebitis may supervene.

In dogs never try to give chloroform by the nostril alone, it excites vagus; and always give very slowly. ½ grn. morphia to moderate sized dogs helps. Cat very susceptible to anæsthetics. I always use ether although I believe most operators give A.C.E. mixture.

Spinal anæsthesia is performed by passing a trochar and canula through the lumbro sacral space, escape of spinal fluid through the canula indicates that the neural canal has been pierced. The parts must be thoroughly disinfected before passing the trochar and canula. One drm. of 5 p.c. solution is generally sufficient. This method is good in hind neurectomies—it may also be of use in ovariotomy. This method is also used in cattle. I have never tried it, however.

Mr. DUCKWORTH asked in regard to injection in the tail whether hypodermic syringe was thought of. He thought it would be better to get a needle like that used in dental work, as it had to penetrate only just under the skin.

Capt. RAWLINS advised that as a good idea.

Mr. MARRISON reported on about half a dozen dockings he had done during the past month, and said he had used a needle about 1½ inches long, and had found not the slightest difficulty in driving the needle home in an oblique direction. He gave one injection on either side, and the animals had not felt the tail come off in any case. All were going on well, and in one troublesome case he found that the twitch was the cause of the bother, and when that was taken off the animal stood quite still.

Capt. RAWLINSON answering Mr. DeVille said physic was not necessary but wise before using anesthetic.

Mr. DeVILLE said if there was any cruelty in docking it was in using the iron, and he objected to its use except in cases of young animals whose tails were too tender to be tied with a broad tape and pad.

Mr. MARRISON said if the iron was used at the right heat not much pain would be caused by searing.

Mr. LEVIE thought the chloroforming of a thoroughbred colt would necessitate a large field being used, and said hypodermic work was going to be an acrobatic performance attended with the greatest risk. With regard to the use of chloroform he asked whether it would not be a good thing to allow one or two inhalations of oxygen when the animal was half over.

Capt. RAWLINS said he had not yet administered chloroform to a young colt standing. He had only given it to working animals, and they did not want a lot of room if two or three men held on to a long head rope and another kept the animal walking round. He had had experience with hundreds and he would not work inside. The giving of oxygen, except in cases of collapse would do harm, as they got a return to the excitement period.

Answering Mr. King he said cocaine needed preservatives in keeping, and in using local anesthetic for castrating he used a twitch.

Mr. MARRISON said in docking it was only necessary to use a finely pointed iron. He strongly objected to the use of tape to stop hæmorrhage. Injection into the testicle for castration was successful if the injection was deep enough, but he did not like the after effects. There was too much swelling and stiffness, and the amount of after attention was more trouble than the operation.

Capt. RAWLINS said some men had peculiar methods and had good results, while others with the same methods lost all they touched. Morphia was quite good for dogs without giving any volatile anæsthetic.

On the motion of the President, seconded by Mr. McIntyre, Capt. Rawlins was accorded a hearty vote of thanks.

In a short discussion on Mr. Levie's paper at the previous meeting on milk, the lecturer said he advocated the use of samples of strippings and not mixed milk for the discovery of tubercle bacilli, and instanced two samples which gave different results from the same udder. As one who had done a good deal of that work and preferred to hide his light under a bushel, he would say that in the first place he did not trouble finding whether tubercle bacilli were there or not, but with the low power microscope he looked to see if there were present the cells which were to be found in every case of tuberculous milk. If those cells were not present the chances of finding bacilli were practically *nil*, but if they were present the method to adopt was to get the high power and find the point where there were the greatest number of cells. Examination must then be very minute, and half-a-dozen slides at least must be used. As a member of the health committee of the town he was concerned about what the law did not deal with. He was not concerned with whether milk contained 3·5 or 1·5 parts of fat, but he was concerned with the presence in milk of something abnormal. It was appalling that milk was allowed to be sold to the public in such dirty, filthy condition. He suggested that a resolution should be sent to the Council of the R.C.V.S., the Board of Agriculture and the Health Authorities of the various councils urging that at an early date the Milk and Dairy Act be brought into force.

Mr. DeVILLE asked if that was the right body to bring the matter forward or whether the public would not think they wanted to insist on inspections and had no further interest.

Mr. LEVIE said their members knew the conditions under which milk was produced, and they should bring the importance of the matter to the notice of the general public. From five to ten per cent. of all dairy cows in Great Britain to-day in milk had diseased udders from one cause or another (he did not refer only to tuberculosis) and five per cent. of those were actually milked, and the milk was mixed with that of healthy cows. It was a crying disgrace.

General agreement was expressed with Mr. Levie's remarks about udders, but it was felt that that was not the proper body to carry the matter forward and no action was taken.

The Secretary was instructed to write to Capt Newton expressing the sympathy of members with him in his serious illness, and sending a wish for his speedy recovery.

F. T. PRINCE, Hon. Sec.

RIDER.— To Anna, wife of James Roland Rider, M.R.C.V.S., a daughter, on 1st May, at 110 Union Grove, Aberdeen.

SUBSCRIPTIONS TO R.C.V.S.

The Secretary of the Royal College of Veterinary Surgeons begs to acknowledge the receipt of the following subscriptions for 1920.

Bell, J., Capt., R.A.V.C. 1918-19-20	£3	3	0
Broadhurst, O. S., Stevenage	1	1	0
Burrell, H., Croydon	1	1	0
Catmull, E. J., London, S.W. 2	1	1	0
Chown, H., Capt. R.A.V.C., 1919-20	2	2	0
Down. R. W., Capt. R.A.V.C. 1919-20	2	2	0
Evans, W. G., Rayleigh	1	1	0
Hughes, J., Welshpool	1	1	0
Hurley, T. J., Carrick-on-Suir, 1919-20	2	2	0
Siddall E. L., New Zealand	1	1	0
Taylor, W. A., Manchester	1	1	0
Previously acknowledged	746	7	11
	£763	3	11

May 6.

R.C.V.S. WAR MEMORIAL.

The Secretary begs to acknowledge the receipt of the following donations, or promises of donations :—

R. W. Down	£5	0	0
P. T. Saunders	1	1	0
W. Aug. Taylor	1	1	0
E. Clive Webb	5	0	0
A. J. Williams	2	2	0
P. F. Woodland	3	3	0
Previously reported	536	11	0
	£553	18	0

OBITUARY.

JOHN ALBERT TAYLOR, Brick Street, Manchester.
Graduated Lon : April, 1871.
Died 19th April, 1920, aged 68.

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.	Rabies. Cases Confrmd Dogs	Rabies. Cases Confrmd Other Anmls	Anthrax Out-breaks (a)	Anthrax Animals.	Foot-and-Mouth Disease. Out-breaks (a)	Foot-and-Mouth Disease. Animals.	Glanders.† Out-breaks (b)	Glanders.† Animals.	Parasitic Mange. Out-breaks (b)	Parasitic Mange. Animals.	Sheep Scab. (b)	Swine Fever. Out-breaks (a)	Swine Fever. Slaughtered. *
GT. BRITAIN. Week ended May 1			10	10		128			61	89	4	55	16
Corresponding week in 1919	12		3	4			1	2	128	219	2	50	15
Corresponding week in 1918			2	2				1	85	148	2	49	16
Corresponding week in 1917			14	15			1	1	47	85	6	69	33
Total for 18 weeks, 1920	4		176	209	42	2432	10	17	2186	3808	271	795	269
Corresponding period in 1919	67	2	67	92	19	1033	6	30	2704	5298	209	472	164
Corresponding period in 1918			115	130			13	37	2314	4446	224	372	130
Corresponding period in 1917			243	278			11	20	1247	2608	354	909	377

(a Confirmed. (b) Reported by Local Authorities.
Board of Agriculture and Fisheries, May 4, 1920

† Counties affected, animals attacked :—
Excluding outbreaks in army horses.

IRELAND. Week ended April. 24.	...	...	...	...	...		Outbreaks	3	1	2
Corresponding Week in 1919 ...	...	...	...	...	...	...	2	4	1	9
Corresponding Week in 1918 ...	...	...	...	...	...	...	2	8		
Corresponding Week in 1917 ...	...	...	...	...	...	...		9	17	81
Total for 17 weeks, 1919 ...	1	1	...	...	1	3	56	139	4	15
Corresponding period in 1919 ...	...	...	...	...	1	1	56	139	16	57
Corresponding period in 1918 ...	1	1	...	...	...	...	57	151	7	27
Corresponding period in 1917 ...	2	2	...	...	1	1	16	193	108	142

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, April 26, 1920.

IRELAND. Week ended May. 1	...	...	...	...			Outbreaks 3	3		1
Corresponding Week in 1919 ...	...	...	...	...	...	...	1			
Corresponding Week in 1918 ...	...	...	...	...	...	...		3		
Corresponding Week in 1917 ...	...	...	...	...	...	...	1	10	5	51
Total for 18 weeks, 1920	1	1	...	...	1	3	59	142	4	16
Corresponding period in 1919 ...	...	...	...	...	1	1	57	139	16	57
Corresponding period in 1918 ...	1	1	...	...	...	...	57	154	7	27
Corresponding period in 1917 ...	2	2	...	...	1	1	17	208	113	793

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, May. 3, 1920
NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection.

VICTORIA VETERINARY BENEVOLENT FUND.

A meeting of the Council of the Victoria Veterinary Benevolent Fund was held at 10 Red Lion Square, W.C., on Thursday, April 8th.

Present:- Mr. S. H. Slocock, Major J. Abson, Mr. G. A. Banham, Maj.-Gen. L. J. Blenkinsop, Prof. J. F. Graig, Prof. S. H. Gaiger, Messrs. P. J. Howard, P. J. L. Kelland, J. McI.McCall, J. W. McIntoch, G. P. Male, W. J. Mulvey, S. H. Slocock, R. C. Trigger, J. Willett.

The minutes of the previous meeting having been printed and circulated, were taken as read and confirmed.

Apologies for absence were received from Messrs. H. J. Dawes, F. L. Gooch, J. Ewing Johnston, T. M'Guinness, W. Jackson Young, Prof. G. H. Wooldridge.

Correspondence. A letter was received from Mr. E. Alfred West, enclosing a cheque for fourteen guineas, being a donation at the rate of two guineas per week from the Bolton Cinema which has now re-opened on Sundays.

Letters were received from the Secretaries of the North Midland Veterinary Association and the South Eastern Veterinary Association enclosing the required subscription of two guineas, and nominating Members to serve on the Council :- North Midland V.A., J. Abson ; South Eastern V.A., Mr. J. B. Buxton. It was resolved: That Messrs. J. Abson and J. B. Buxton be duly elected Members of the Council.

Secretary's Report.

The following new Subscribers have been registered since the last Council Meeting. In accordance with Article 4, these gentlemen are now to be formally admitted as Members.

J. Allan		10	6
E. J. Burndred	1	1	0
J. R. Godbold	1	1	0
W. Hamilton	1	1	0
R. E. Lloyd		10	6
C. Macpherson		10	6
W. S. Petrie		10	6
C. A. Powell	1	1	0
J. P. Rice		10	6
J. Spruell		10	6
C. W. Townsend		10	6

The following subscriptions have been received from Veterinary Societies :-

North of England V.M.A.	2	2	0
South Eastern V.S.	2	2	0

Donations have been received during the quarter as follows :-

Boltons Cinema, 7 weeks	14	14	0
Mrs. Stuart		10	6
G. A. Banham, Collecting Box		10	0
T. S. Price do.	1	0	0
J. & H. Sumner do.		11	8
Southern Counties V.S. do.	1	0	6
"The Gamblers Dole"	1	10	4

As instructed, the sum of £200 Consols has been purchased, bringing the total holding in this stock to £4000.

The Accounts have been audited and the financial statement and balance sheet are included in the draft Annual Report submitted for approval.

It was resolved That the gentlemen named as new subscribers be formally admitted as members of the Fund.

That the Common Seal be attached to the necessay documents for the purchase of £200 consols.

The audited statement of accounts for the year was submitted and approved and ordered to be entered in the annual report.

The Secretary submitted a draft of the annual report, and it was resolved That the report be approved and that the Secretary be authorised to obtain 750 copies.

Cases.

No. 5. A report was received from Mr. W. Smart on this case, and it was resolved That the grant be increased to £1 per week.

No. 12. This case was again carefully considered together with information obtained from local correspondents—It was resolved That the previous decision of the Council be adhered to.

No. 22. The President reported that the Executive Committee had made an interim grant of an additional 10/- per week in this case, owing to the illness of the recipient—It was resolved That the action of the Executive be approved and that the additional grant be continued for the present.

No. 47. M.R.C.V.S. A report was received from the member having charge of this case to the effect that an increase in the grant could be well utilised, and it was resolved—That the grant in this case be increased to 15/- per week and that the member be thanked for the care and trouble he has taken.

No. 54. Widow, aged 69, crippled. No income. This application was considered, and it was resolved—That a grant of £1 per week be made for the present until the applicant is entitled to the old age pension.

Professional Classes War Relief Council. The President submitted a report of a conference of a professional institution and Benevolent Fund held on February 18th for the purpose of considering the formation of a permanent central organisation. After due consideration it was resolved—That no action be taken for the present.

INDIAN ARMY VETERINARY PAY.

The following scale of grade pay for officers in the Army Veterinary Service in India will take effect from July 1, 1919 :—

Lieutenant	Rs. per mensem	550
Captain, on promotion		650
Captain, after two years' service as such		700
Major, on promotion		950
Major, after five years' as such		1,050
Lieutenant-Colonel		1,300
Colonel		1,450

Staff pay is admissible in addition of the above rates. Army of Occupation bonus is not admissible, but in cases where the old rates with the bonus are more favourable they may be retained until the general abolition of the bonus or until promotion. Children's allowance, when admissible under Indian regulations, may be drawn with the new rates of pay up to December 31, 1919. These rates of pay will not carry exchange compensation allowance. They are provisional and will be subject to revision when permanent rates of pay are fixed for other military services in India.—*The Times.*

The increases which have been made will assist officers, R.A.V.C. serving in India, but owing to the greatly increased cost of living in that country, the new rates may not be considered to be liberal. It is understood that they have been based on the pay granted to the Medical Services, and it will be seen that they are practically the same, but in the higher ranks of Lieut.-Colonel and Colonel the Veterinary Service is left behind.

It must be remembered that the pay of the Medical Services is greatly augmented by allowances in the nature of Charge pay, Staff pay, etc., and that these are far larger, and far more generally drawn in the Medical Service, consequently in the comparison of pay and emo-

luments between the Royal Army Veterinary Corps and the Medical Service, the former, except in the very junior ranks, will be found to be but poorly recompensed, especially when the rate of promotion in the Medical Service is considered against that in the Royal Army Veterinary Corps.

It will be seen also that they closely resemble the rates of pay of the combatant branches, though here also, in making any comparison it must be noted that the average age of officers entering a combatant branch is about four years younger than that of officers joining the Royal Army Veterinary Corps.

If this difference of age is taken into account the rates of pay are less favourable to the Royal Army Veterinary Corps, for the period of service towards promotion in the Indian Army is about 8 or 9 years for Captain and 15 years for a Major; the latter being the same in the Royal Army Veterinary Corps. Thus the average age on promotion to Captain in the Indian Army is about 28 years and Major 34 years. In the Royal Army Veterinary Corps it is 28 and 38 years for these two ranks respectively.

The old rates of pay of the Royal Army Veterinary Corps serving in India compared with those now granted to the Combatant branches and R.A.M.C. and the Indian Medical Service are shown in the following table.

	R.A.V.C. Former Rates. Rs. per mensem.	R.A.V.C. New Rates. Rs. per mensem.	I.M.S. and R.A.M.C. New Rates. Rs. per mensem.	Combatants. New Rates. British Service.	Combatants. New Rates. Indian Army.
2nd Lieut.				425	425
Lieut.	480	550	550	475	475
Capt.	570	650	650	750	700
After 2 yrs.		700	700, after 5 years' total service.		
„ 5 yrs.	650		750, after 7 years' total service		
„ 9 yrs.			850, after 10 yrs. total service.	750	750
Major	750	950	950	950	900
After 5 yrs.	800	1050	1050, after 3 years' service.	1050	950
Lt.-Col.	1120	1300	1350 1500, after 3 years'	1250	1150
Col.	1220	1450			

The present value of the Rupee is 2/3, it has been higher lately, but Government has announced its intention of fixing it at 2/-. The figures given as Rs. per mensem have only to be divided by 10 to bring them to £ sterling.

NATIONAL VETERINARY MEDICAL ASSOCIATION

North Midland Division.

The seventh annual meeting was held at the Grand Hotel, Sheffield, on March 2nd. Present: Mr. R. Hudson, President, in the chair, Major J. Abson, D.S.O., Messrs. T. Bowett, W. Collinson, T. C. Fletcher, J. A. Hodgman, S. H. Nixon, M. Robinson, S. E. Sampson, H. Thompson, H. L. Torrance, J. H. Yates and the Hon. Secretary. Mr. J. M. Armfield was also present as a visitor.

Mr. Collinson, past President, opened the meeting and thanked all for their support during his year of office, and hoped Mr. Hudson would have a successful year in the presidential year.

Mr. Hudson then took the chair and thanked the members for his election. The minutes of the last meeting were read by the Hon. Secretary and were adopted.

The minutes of the Council meeting held on the 20th February were also read and approved. Arising out of the latter, Mr. Fletcher proposed that two guineas be given as an annual subscription to the Victoria Veterinary Benevolent Fund, and Maj. Abson was appointed to represent the Association on the Council of that body.

The Hon. Sec. also read the minutes of a meeting of the Insurance Sub-Committee held on January 20th. He gave figures showing the insurance business done by four members of the Sub-Committee. Three of the members showed a gain on three years business of a total of £538, whilst one member's figures showed a loss on the three years of £80, thus leaving a total net profit for three years of £453 or equal to £151 per annum. The only member showing a loss was one that had had four deaths of working horses amongst the animals insured through his agency. Leaving working town horses out of the insurance scheme, the Sub-Committee considered that the insurance of mares and foals, and animals for castration and operation risks was a paying concern, but doubted whether it was sufficiently profitable to warrant the members of the Association starting a new business with its attendant expenses of office accomodation, clerical, legal and other costs.

The Hon. Treasurer submitted his Balance Sheet for 1919, which showed that on the year's working the balance in the bank had been increased from £37 10. to £40 16s. The accounts having been duly audited were passed, and cheques ordered to be drawn for some accounts unpaid. Mr. Thompson mentioned that the subscriptions received included one guinea as a donation to the Association by Mr. Armfield.

PRESIDENTIAL ADDRESS

Mr. R. Hudson, F.R.C.V.S., Retford.

Gentlemen,—I have not accepted the presidency of our Society without some doubts as to my ability to carry out the work it imposes on me, for being new to the position, and following such good men, one naturally feels scared at the blunder incomptence may give rise to. However, trusting to the kindness you have always shown me, I hope with your assistance to carry through to the end of my term of office, and that the Society may carry on and show itself as progressive as it has done in the past.

The work of the veterinary profession since its origin, has been of great service to the community in overcoming the numerous contagious diseases and saving it from loss in the course of general practice: and whilst animal contagion exists in countries round us and animals exist here to be treated there will always be work for us to do. It may be that certain work will become less or change with changing conditions, and may need altered Veterinary Surgeons and ways of working.

Years ago it was common practice for son to follow father in the profession, but the coming of motor traction has frightened many, and caused them to send their sons into other walks of life. Whether that fear is justified or not it is difficult to say, but when we consider the great demand there is and will be in the future for increased production of the various necessaries of life, I for one see little to fear.

Although, at the present time a cloud hangs over Agriculture, with which the future of the veterinary profession is closely bound, I am inclined to think that agriculturists in this country will be forced to enter upon a system of increased production: they will have to enter upon a system of intensive cultivation and along with it will go the veterinary profession for good or ill.

An increase of people on the land will mean an increase of animals, so the change will probably be for the good.

At the present time there appears to be a scarcity of Veterinary Surgeons, and an increase in the number of quacks, some of whom are running cars and doing good business. I do not think the R.C.V.S. can look upon its work against them with credit; but if we look well into the matter I think we may excuse them, for they have little means of putting them down. The best remedies are to produce Veterinary Surgeons who can beat them at their work, and to stop the production of them. This the R.C.V.S. has not always done. In many cases such men have served some years under a good practitioner and are often well up in practical work.

It is well known that a client judges a Veterinary Surgeon by his failures and a quack by his cures, so that it behoves us to see that the young graduate is well-trained in the handling of stock and the various operations on farm animals.

Perhaps the greatest quack producer is the Veterinary Surgeon who employs unqualified assistants, for sooner or later they quarrel, and the assistant departs to set up on his own account. In time perhaps the R.C.V.S. will stop this—probably the greatest source of production.

The future will see an increase of measures dealing with Public Health which will provide extra work for members of the veterinary profession, and the tendency is to make the appointments 'whole-time' ones. It is the proper thing to do while a town can afford it, but many towns cannot afford a whole-time M.O.H. so that I am sure they will not provide a Veterinary Officer.

Someday we are to have a bill through Parliament to enable us to put our College on a sound footing, and may it be soon. Few of us care to think that our parent is in such sore straits and would be sorry for it to lose its independence by being absorbed by some Government education department.

In almost every kind of work, we see to-day societies being formed for the safeguarding of interests of their individual members, and it is surprising what good results have accrued to them in many instances, but apart from monetary considerations, we must not forget that such societies as ours were originated for the propagation of knowledge. All the same, I would not put aside the consideration of questions dealing with our welfare, but urge the importance of all members joining some society so that there may be more solidity among us. Whatever we meet for, there is bound to be some question discussed which may help us either materially or mentally. Our meetings have been a source of pleasure and benefit to me, and I am sure they are to all who attend. Though fairly well attended, more members might make a push to come, for Sheffield is a good centre.

I see some societies are making an effort to amalgamate their meetings, though retaining their individuality, and I think the idea is a good one where larger matters are at issue, though it may be better to support well our National Society and, after consideration, to pass business on to it.

I have sometimes thought that societies might advance our knowledge by some scheme by which its various members might be called upon to try new drugs, new methods of treatment, new instruments etc., and report results at meetings. It would create fresh interest and perhaps pull some of us out of the 'stick in the mud' condition into which we lapse after a few years in practice. I do not see why we should always be looking to some College or 'big gun' to help us on our way. We often have good opportunities for initiation and experiment, and in the future I hope to see this society turn out some original work.

(To be concluded.)

ARMY VETERINARY SERVICE

Extracts from *London Gazette*

REGULAR FORCES. ROYAL ARMY VETERINARY CORPS.

WAR OFFICE, WHITEHALL, April 27.

Lt.-Col. T. W. Rudd, C.B.E., relinquishes the actg. rank of Col. on ceasing to hold the appt. of D.D.V.S. (March 13).

The follg. temp. Capts. relinquish their commns. on completion of service :— F. Chambers, O.B.E., F.R.C.V.S., (June 30, 1919) and is granted rank of Maj. And retain rank of Capt. :—W. Anderson, M.C. (March 4); J. E. Bennett (March 18); J. Bradley (Nov. 6, 1919); H. Cooper (Feb. 26); A. F. Dykes (March 15); T. Gordon, M.C. (March 1); J. Jaques (March 12, 1919); S. C. McKee (March 8); T. W. McMahon, M.C. (March 8); B. S. Parkin (March 9); J. D. Scott (Feb. 26); J. Simpson (Feb. 25); H. F. Vulliamy (March 14); P. W. Walker (March 12).

The follg. relinquish actg. rank of Maj. on ceasing to hold appt. of D.A.D.V.S. :—Capt. H. E. A. L. Irwin (Dec. 2, 1919); Temp. Capt. J. H. Taylor M.C, F.R.C.V.S. Feb. 27).

April 28.

Capt. R. W. Mellard, D.S.O., relinquishes the actg. rank of Maj. (March 17).

Temp. Capt. H. Brinsmead relinquishes his commn. on account of ill-health (April 29), and retains the rank of Capt.

To be Capts. (April 29) :—From temp. Capts.—W. M. Rouse, G. F. Watkins, J. Leigh, from Capt., Spec. Res. From temp. Capts.—T. F. Arnold, A. H. Morris, J. Judge, A. J. Kelly.

April 30.

Maj. A. G. Todd, C.B.E., D.S.O., relinquishes the temp. rank of Col. on ceasing to hold the appt. of D.D.V.S. (Nov. 15, 1919).

The follg. Majs. relinquish the actg. rank of Lt.-Col. on ceasing to hold the appt. of A.D.V.S. :—J. Nicholas, O.B.E. (Sept. 15, 1919); Bt. Lt.-Col. E. P. Argyle, D.S.O. (Nov. 15, 1919).

May 3.

Temp. Capt. H. E. Whitemore relinquishes his commn. on completion of service (March 29), and retains rank of Capt.

SPECIAL RESERVE OF OFFICERS.

April 27.

The follg. Capts. resign their commns. :—R. F. Stirling, F.R.C.V.S. (April 28), and is granted the rank of Maj.; M. G. O'Connell (April 1), and retains the rank of Capt.

May 4.

Capt. D. C. Greene relinquishes his commn. (April 1), and retains rank of Capt.

ANNUAL DINNER.

ROYAL ARMY VETERINARY CORPS

Preliminary Notice.

The Annual Dinner will be held at the Savoy Hotel, on Friday the 18th June, 1920, at 8 p.m. All who have held commissions in the R.A.V.C. are eligible to attend.